PLAN FOR THE UNIFORM MAPPING OF EARTH RESOURCES AND ENVIRONMENTAL COMPLEXES FROM SKYLAB IMAGERY

EREP INVESTIGATION #510

Period Covered: February 1, 1975 to February 28, 1975

Contract Number: NAS 9-13286

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EarthSat Number: G-089

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Monthly Plans and Progress Report

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OVERALL STATUS

Activity has been resumed with vigor toward completion of research and compilation of the final report on this project.

Natural Vegetation Analog Study

Photographs have been selected for use in final image and legend evaluation. The plan of action now calls for us to accomplish as many of the image and legend evaluation tasks defined in the contract as possible with the imagery received to date and within the remaining budget.

While we have received our first color composite (conical scan) from the S-192 system, we have not received all S-192 materials requested. Nevertheless, we are proceeding as planned.

A limited amount of formal photo interpreter testing is being arranged for evaluating the natural vegetation legend and the various images received. This effort will involve two analog sites--Sierra Lahontan and Colorado Plateau--with cross-testing of images of the two areas of various recognizable legend components on the remote sensing material available. The tests will determine quantitatively the interpreter's ability to identify consistently legend types on the two analog sites. In each case training image sets of desired features will be located in one area and those image features will serve as guidelines for interpreting vegetation complexes on the other area. At the same time, other individuals will interpret images where the

training sets are taken from the same area. Thus, a cross-testing of image types and vegetation (legend) components will be achieved.

Rice Analog Studies

A limited test of photo interpretation rice yield estimation is planned as a final step in the research activity on this project. This effort will utilize a set of images taken of one of our test sites where ground truth from cooperating growers on several rice fields is available.

Using several dates of photography from all systems available--Skylab, ERTS and supporting aircraft--we will determine the approximate date when each of several critical events in the rice cultural process took place. In addition, we will estimate the area of each rice field affected by a stress condition and apply various statistical methods to derive a yield estimate on a field-by-field basis for comparison with actual yields. In this process the usefulness of each system for the desired interpretations will be made.

Preparing the text and photo input to the final report has been started.

PLANS FOR THE NEXT REPORTING PERIOD

All efforts now are directed toward final image and technique evaluation, quantification of system performance and procedures, and in final report preparation. If we are selected to present a paper at the June Skylab/ERTS conference, we will begin work on that presentation.

TRAVEL PLANS

None planned.

PERSONNEL

No changes in personnel have occurred.

PROBLEMS

We are proceeding in spite of the fact that final S-192 data are still not available.